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MEAT EXTENDERS

Meat extender dishes come back into their own by the recent change in meat rationing. Macaroni, spaghetti, and noodles, all good meat extenders, are among this month's foods in abundant supply. There are, however, important factors to be considered when these foods are used as the main dish in the worker's meal.

What about protein content?

A serving of plain macaroni, spaghetti, or noodles contains a very small amount of protein, not nearly enough to contribute one-third of the daily requirement. Therefore, they should be combined with meat, poultry, fish, eggs, or cheese; in order to furnish enough protein for an adequate meal. Portions should be not less than 6 ounces.

Macaroni, spaghetti, or noodle dishes that contain neither meat nor a meat alternate, such as spaghetti with tomato sauce or scalloped noodles with vegetables, may be served to accompany meat but should not be used as meat substitutes.

What about flavor, color, texture?

The food manager who knows her public's taste will carefully combine a macaroni, spaghetti, or noodle meal with foods strong in flavor, vivid in color, and different in texture. Tomatoes, green peppers, pimientos, meats and cheese are flavorful additions. Crisp, green salads add an excellent contrast to the soft-textured paste products. Fruit salads, carrot sticks, and sliced tomatoes all add flavor, color and texture.

Good and bad combinations

It is simple to plan an appetizing, nutritious menu, but too often an unappetizing combination appears on the menu board with a main dish of macaroni, spaghetti, or noodles. Here's a typical example of a poor menu:

Macaroni and cheese
Mashed potatoes
Creamed onions
Whole-wheat bread and butter or fortified margarine
Coconut cream pudding
Beverage

All these foods are soft in texture, bland in flavor, and colorless. There is no

"eye appeal" to attract the customer and make him think "that looks good." With a few changes, this meal can be transformed to a gourmet's delight:

Macaroni and cheese
Buttered carrot strips
Tossed green salad
Whole-wheat rolls and butter or fortified margarine
Peach cobbler
Milk

This menu is colorful, it provides piquant flavor as well as crisp texture in the tossed green salad and the tart dessert. It is more nutritious than the first menu because the vegetables provide a more liberal allowance of vitamin A and vitamin C, and because the milk supplies calcium, high quality protein, and riboflavin.

Other suggestions for combinations

These suggestions for main-course combinations when macaroni, spaghetti, or noodle dishes are the main dish of the meal, have been planned with an eye to texture, color and flavor:

Creole macaroni with meat, buttered green peas, fresh fruit salad.
Macaroni with tomatoes and bacon, buttered broccoli, raw carrot strips.
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QUICK FREEZING MAKES MEAT TENDER

Formation of ice crystals within the fibers of meat that is frozen, resulting in splitting of the fibers, is believed to be the explanation of the "tenderizing" effect of sharp freezing of meat. At temperatures only a few degrees below the freezing point, U.S. Department of Agriculture scientists did not find ice crystals within the fibers when they were investigating the effects of low temperature on the tenderness of beef. At zero F, crystals were evident, and at 10 below and 40 below the crystals were finer, there were more of them, and the frozen meat was more tender when thawed and cooked.

The experimenters, O. G. Hankins and R. L. Hiner of the Bureau of Animal Industry, report that there has long been a prejudice against frozen meat. These recent laboratory measurements of the actual effects on tenderness should help greatly, they believe, in leading consumers to appreciate the effects of good methods of freezing.

In general, aging or "ripening" has been depended on to make meat more tender. After beef or lamb is slaughtered, it is often kept hanging in a cooler for as long as several weeks, at a temperature only slightly above freezing. This prevents rapid multiplication of the bacteria that cause spoilage, but does not prevent the action of enzymes that are already in the meat. The action of the enzymes is in some respects similar to digestion, and the effect on the muscle fibers and connective tissue is to make them more tender.

In a study of aging for as long as 35 days and freezing at 20 above and 10 below zero, the best combination to keep deterioration down and obtain a good tenderizing effect was to age the meat for 15 days and then freeze it at 10 degrees below zero F. Beef aged only 5 days and frozen at 10 below zero was as tender as beef aged 35 days without freezing.

Spaghetti with cheese, baked Hubbard squash, cabbage slaw.

Italian spaghetti with meat balls, buttered spinach, apple and orange salad.

Scalloped noodles with chicken, buttered green beans, cabbage and carrot salad.

Scalloped noodles with eggs and cheese, buttered kale, tomato and endive salad.

Recipes which follow are given for two meat extender dishes and one meat alternate dish:

Creole Macaroni with Meat

<u>Ingredients</u>	<u>Amount</u>	
	<u>100 portions</u>	<u>500 portions</u>
Macaroni, cut	6 pounds	30 pounds
Boiling water	6 gallons	25 gallons
Salt	3 ounces	12 ounces
Canned tomatoes	2 gallons	10 gallons
Onion, chopped	1 pound	5 pounds
Green peppers, chopped	12 ounces	3½ ounces
Bacon fat	1 pound	5 pounds
Ground beef and pork	6 pounds	30 pounds
Chili powder	½ ounce	2½ ounces

Size of portion -- 6 ounces.

1. Cook the macaroni in boiling, salted water until tender. Drain.
2. Cook the onions and peppers in the bacon fat for 5 minutes. Add meat and brown.
3. Combine the meat, tomatoes and macaroni.
4. Pour into greased baking pans and bake at a moderate heat (350°F.) 45 minutes.

Baked Spaghetti with Pork

<u>Ingredients</u>	<u>Amount</u>	
	<u>100 portions</u>	<u>500 portions</u>
Spaghetti, broken	6 pounds	30 pounds
Boiling water	6 gallons	25 gallons
Salt	3 ounces	12 ounces
Onions, chopped	1 pound	5 pounds
Carrots, chopped	5 pounds	25 pounds
Celery stalks and leaves, diced	2 pounds	10 pounds
Green peppers, chopped	1 pound	5 pounds
Pork shoulder, cut in ½-inch cubes	10 pounds	50 pounds
Bacon drippings	1 pound	5 pounds
Paprika	½ ounce	2½ ounces

Size of portion -- 6 ounces.

1. Cook the spaghetti in boiling, salted water until tender. Drain.
2. Steam the chopped carrots, celery, and peppers until just tender.
3. Cook the onion and pork in fat until lightly browned.
4. Combine the vegetables, spaghetti, and meat. Season with paprika.
5. Put into greased baking pans and cook at a moderate temperature (325°F.) for about 1½ hours or until the meat is tender.

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Scalloped Noodles, Eggs, and Cheese

Ingredients	Amount	
	100 portions	500 portions
Noodles, dry	6 pounds	30 pounds
Boiling water	5 gallons	25 gallons
Salt	2 ounces	10 ounces
Cheese, Cheddar, ground	3 pounds	15 pounds
Paprika	$\frac{1}{2}$ ounce	$2\frac{1}{2}$ ounces
Milk	2 gallons	10 gallons
Fat	$1\frac{1}{2}$ pounds	$7\frac{1}{2}$ pounds
Flour	1 pound	5 pounds
Salt	$\frac{1}{2}$ ounce	$2\frac{1}{2}$ ounces
Hard cooked eggs	50	250

Size of portion -- 6 ounces

1. Cook the noodles in boiling, salted water until tender. Drain.
2. Make a sauce of the fat, flour, salt, and milk.
3. Add the ground cheese and paprika to the hot sauce and stir until mixed.
4. Slice the eggs crosswise.
5. Put alternate layers of noodles, cheese, sauce, and eggs in greased baking pans. Top with cheese sauce.
6. Bake at a moderate temperature (350°F.) for 45 minutes or until well heated and lightly browned.

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